MSD

May 1, 1998

Ms. Liza I. Montalvo
Remedial Project Manager
Kentucky/Tennessee Section
U. S. EPA, Region IV
61 Forsyth Street
Atlanta, GA 30303

Re: Results of Air Quality Monitoring - FY98 Second Quarter (FY98-2Q), (Event No. 21) Lees' Lane Superfund Site, Jefferson County, Kentucky Administrative Order on Consent, U. S. EPA Docket No. 91-32-C

Dear Ms. Montalvo:

In accordance with paragraph 11, under, Reporting Requirement, of the subject Consent Order and Attachment I, Operation and Maintenance Plan for Post-Removal Site Control at the Lees' Lane Landfill Site, Section 4.2, Air Quality Monitoring, attached for your information and files is one photocopy each of the following items, prepared by Radian Corporation, P. O. Box 13000, Research Triangle Park, North Carolina 27709, and received by MSD on April 27, 1998.

1. Radian Corporation letter, dated April 14, 1998, 2 pages.

2. Figure 1, Lees' Lane Landfill, Sampling Locations, 1 page.

3. Table 1, TO-14 Data Summary for Ambient Air Samples at the Lees' Lane Landfill, Sampling date: 12/17/97, 1 page.

4. Table 2, On-Site Meteorological Data, 12/17/97, 1 page.

5. Table 3, TO-14 Data Summary for Gas Monitoring Well Samples at the Lees' Lane Landfill, Louisville, KY, Sampling Date: 12/17/97, 1 page.

Louisville and Jefferson County Metropolitan Sewer District
700 West Liberty Street Louisville, Kentucky 40203-1913 502-540-6000

Please advise if you have any questions concerning the attached information.

Sincerely,

Carl A. Neumayer
Director of Operations

CAN/dc
Lee'sair1Q98

cc: Mr. Jeff Pratt, KNREPC,
Division of Waste Management
Mr. Rick Hogan, KNREPC
Division of Waste Management
G. R. Garner, Executive Director
File: WD-2 (Lees' Lane M & M Quarterly)

RADIAN INTERNATIONAL LLC
P.O. Box 13000
Research Triangle Park, NC 27709
(919) 461-1100
FAX (919) 461-1415

219116.2201

April 14, 1998

Mr. Dan Sammons
Chief Chemist
Louisville Metropolitan Sewer District
4522 Algonquin Parkway
Louisville, KY 40211

Dear Dan:

Enclosed is the summary analytical report for the ambient and gas monitoring well samples collected at the Lee's Lane Landfill site on 17 December 1997 (Quarter 21).

A map of the site, labeled with the sample collection locations for your reference, is shown in Figure 1. Table 1 is a tabular summary for the ambient sample with the primary analytes required for submission to EPA. Methylene chloride values from two of the ambient canister samples are reported at elevated levels. Quality control data from the field blank and laboratory replicates support the presences of methylene chloride in these samples.

No elevated levels from the gas monitoring wells were reported during the quarter.

The monitoring sites for the collection were chosen based on a combination of prevailing on-site meteorology and available sites in the adjacent residential neighborhood per the standard sampling protocol. The meteorological conditions were cool (30-50 F) with light North to Northwest winds for most of the monitoring day. Meteorological data readings on-site were invalid due to equipment malfunction, therefore the information displayed in Table 2 was obtained from the Louisville airport's National Weather Station. The ambient samples were collected 3-5 feet above ground level. The ambient samples collected were integrated over a 7-8 hour collection period in Summa® canisters.

The methane analysis was performed by GC/FID on a separate analytical system prior to the TO-14 analysis at Radian's Austin Laboratory. The TO-14 analytical methodology using Gas Chromatography/Mass Spectrometry (GC/MS) was employed. Samples were handled with standard laboratory chain-of-custody procedures. Sample canisters and flow controllers were cleaned and blanked using method TO-12 for total nonmethane hydrocarbons prior to field deployment. All thirteen field samples were successfully analyzed for methane and the TO-14 target analytes. Quality control parameters of precision (repeatability) and spiking of surrogate compounds meet internal Radian required specifications. The reliability of this data set can be characterize as very good quality data, based on the repeatability (analytical precision), surrogate spike recoveries, blank levels, and the relatively few number of unresolved interfering peaks in

the sample chromatogram. All field sample canisters were 100% positive and negative pressure leaked checked prior to field deployment. This corrective action was successful in resolving the field sample loss encountered during the previous quarter. The completeness criteria is now back to within program specifications (>90%).

Table 3 is a tabular summary of the gas well samples with the primary analytes required for submission to EPA. The gas monitoring wells were screened with portable survey type instruments prior to field sample collection. The reported methane values this quarter are high only for Well G-1. This sample required significant dilution in the laboratory to allow for proper analysis. The presence of methane at the reported level (19,200 ppmv) resulted in coelution for several TO-14 compounds during the analysis. The laboratory methane measurement was confirmed in the field by the field OVA analysis. (The coelution was resolved satisfactorily by the dilution step with a corresponding decrease in analytical sensitivity). The field log noted that the blower on the collection system was in operation during the collection period.

Radian appreciates the opportunity to assist your staff with this project. Please advise me at (919) 461-1242 if you have any questions.

Sincerely,

Robert F. Jongleux
Project Manager

RFJ/Task 22

Enclosure

c: M. McCoy, Radian/RTP
Project File/Task 22

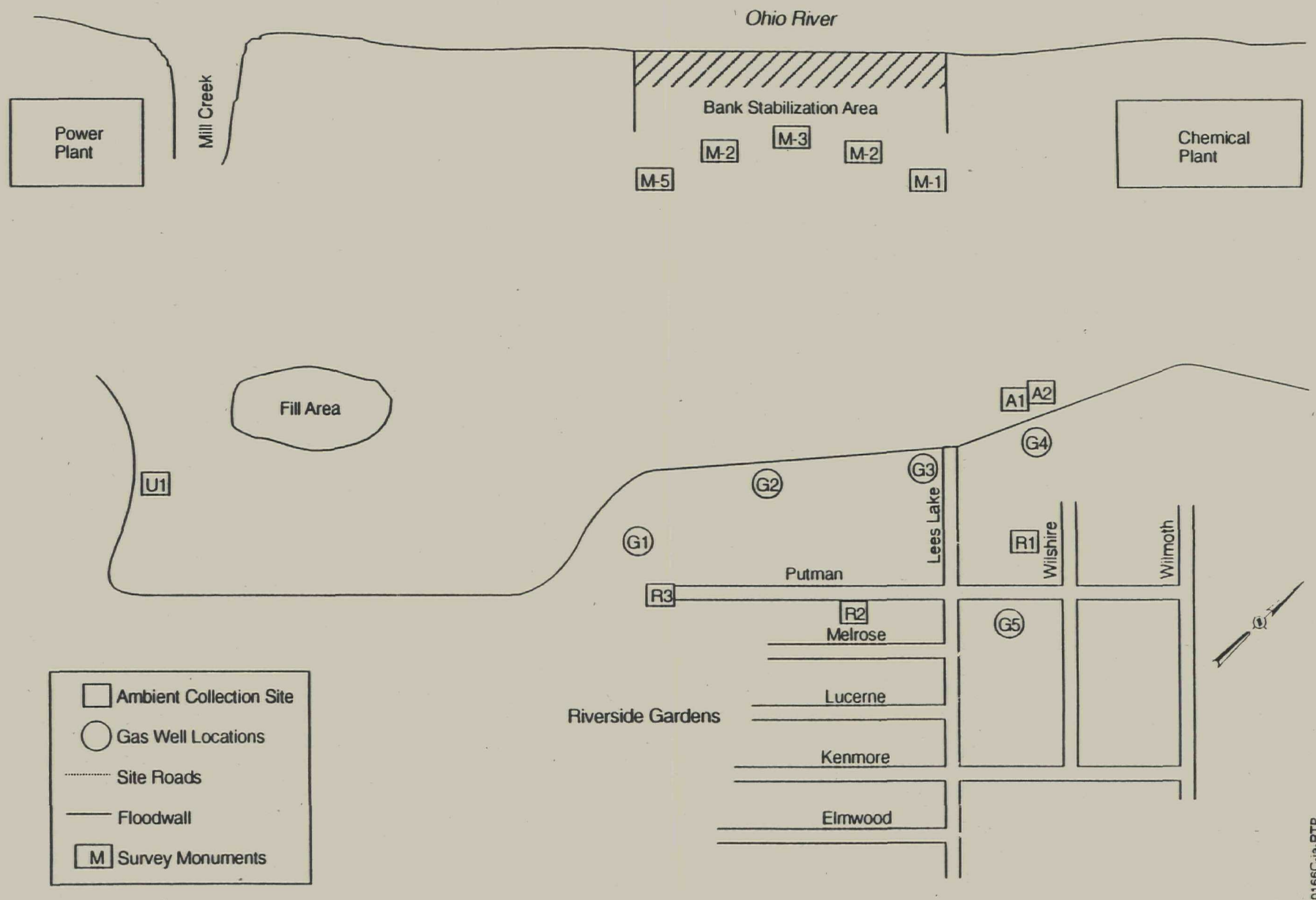

Figure 1. Lees Lane Landfill Sampling Locations

TABLE 1

TO-14 DATA SUMMARY FOR AMBIENT AIR SAMPLES AT THE LEE'S LANE LANDFILL LOUISVILLE, KENTUCKY

SAMPLING DATE: 17 December 1997

	Ambient Air Samples					
Sample ID	U1	A1	A2	R1	R2	R3
Canister ID	A193103	A193100	A193105	A193107	A193110	A193221
Dilution Factor	0.2131	0.2835	0.2551	0.3176	0.2796	0.2430
Location	Upwind	On-site	On-site (dup)	Residential	Residential	Residential
Veriflow ID	A168513	A134091	A134133	A134135	A133240	A134131
Compound (ppbV)						
Benzene	1.20	1.27	1.32	1.73	1.96	2.06
Methylene chloride	1.23	14.20	2.66	0.54	5.52	10.50
Toluene	4.12	4.43	4.11	4.89	5.34	5.67
Vinyl chloride	ND	ND	ND	ND	ND	ND
Xylene (Total)	0.81	1.08	1.12	1.45	1.65	1.97
Methane (ppmV)	5.86	3.58	3.54	3.06	3.64	6.38

TABLE 2

LOCAL METEOROLIGICAL DATA

SAMPLING DATE: 17 December 1997

Time	Barometric Pressure (in Hg)	Temperature (F)	Dewpoint (F)	Wind Direction (from)	Wind Speed (knots)	Observation
0600	29.95	35	22	Calm	N/A	Cloudy
0700	29.96	32	23	Southeast	5	Partly Cloudy
0800	29.98	33	23	Calm	N/A	Partly Cloudy
0900	29.99	33	26	Calm	N/A	Partly Cloudy
1000	30.01	39	27	Calm	N/A	Partly Cloudy
1100	30.02	44	28	Northwest	3	Partly Cloudy
1200	30.00	47	26	North	5	Partly Cloudy
1300	29.98	49	27	Northwest	6	Partly Cloudy
1400	29.98	51	29	Variable	6	Sunny
1500	29.97	52	30	North	6	Sunny
1600	29.99	52	30	North	7	Clear
1700	29.99	50	30	North	7	Clear

Source: National Weather Service, Louisville, Ky.

TABLE 3

TO-14 DATA SUMMARY FOR GAS MONITORING WELL SAMPLES AT THE LEE'S LANE LANDFILL LOUISVILLE, KENTUCKY

SAMPLING DATE: 17 December 1997

Sample ID	Well Samples						BLANK
	G1	G2	G3	G4	G5-L	G5-R	
Canister ID	A193111	A1193112	A193106	A193099	A193108	A193104	A193109
Dilution Factor	0.4387	0.4296	0.4375	0.3975	0.3921	0.4157	0.3839
Orifice	D-104	D-3	B-1	D-8	D-6	D-33	N/A
Compound (ppbV)							
Benzene	3.95	0.31	0.71	0.21	0.19	5.54	0.03
Methylene chloride	1.14	0.18	0.24	0.19	0.50	0.53	0.41
Toluene	29.90	1.86	1.52	0.38	1.03	8.50	0.05
Vinyl chloride	4.85	ND	0.07	ND	0.15	ND	ND
Xylene (Total)	1.04	0.13	0.45	0.16	0.19	5.42	0.10
Methane (ppmV)	192000	5.71	3.32	2.98	ND	5.33	ND